

IN THE CLAIMS:

In accordance with the Revised Rules under 37 C.F.R. 1.121, please amend the claims as shown below. The claims shown below may be indicated as original, currently amended, previously amended, cancelled, previously cancelled, withdrawn, previously withdrawn, new, previously added, reinstated, previously reinstated, and/or re-presented. In accordance with the Rules, the text of cancelled or withdrawn claims need not be presented.

Please cancel claims 2-26 without prejudice, leaving one claim, namely, claim 1, still remaining in the subject continuation application. Thereafter, please add new claims 27-55, and then delete claim 1.

(cancelled) Claims 1-26

27. (new) A method of adjusting the elevation of a beam produced by a panel antenna in a cellular base station telecommunication system, the method comprising:

providing a differential electromechanical phase shifting structure having an input and first and second output transmission line sections operatively coupled to first and second spaced radiating elements, and

using an electrical actuator controlled by a control arrangements, at least a part of which is located remote from said antenna, moving a moveable component of the phase shifting structure relative to said first and second transmission line sections to differentially advance signal phase in one of said first and second transmission line sections while commensurately retarding signal phase in the other of said first and second transmission line sections to adjust the beam from a first fixed elevation to a second fixed elevation.

28. (new) The method of claim 27 wherein said electrical actuator comprises an electric motor located on said panel antenna and mechanically coupled to said actuator.

29. (new) The method of claim 28 wherein said motor is coupled to said moveable component.

30. (new) The method of claim 29 including providing between said moveable

component and said motor, a screw drive, rack-and-pinion drive or gear drive.

31 (new) The method of claim 27 wherein said control arrangement comprises a hierarchy of controllers.

32. (new) The method of claim 31 wherein said hierarchy of controllers comprises a controller located at or near the antenna, and a distant central controller.

33. (new) In a cellular base station telecommunication system, a panel antenna configured to produce a beam remotely adjustable in elevation, comprising:

first and second spaced radiating elements;

a differential electromechanical phase shifting structure having an input and first and second output transmission line sections operatively coupled to said first and second spaced radiating elements;

an electrical actuator controlled by a control arrangement at least a part of which is located remote from said antenna; and

a moveable component of the phase shifting structure being configured such that moving said component relative to said first and second transmission line sections differentially advances signal phase in one of said first and second transmission line sections while commensurately retarding signal phase in the other of said first and second transmission line sections to adjust the beam from a first fixed elevation to a second fixed elevation.

34. (new) The system of claim 33 wherein said electrical actuator comprises an electric motor located on said panel antenna and mechanically coupled to said actuator.

35. (new) The system of claim 34 wherein said motor is coupled to said moveable component.

36 (new) The system of claim 35 including providing between said moveable component and said motor a screw drive, rack-and-pinion drive or gear drive.

37. (new) The system of claim 33 wherein said control arrangement comprises a hierarchy of controllers.

38. (new) The system of claim 37 wherein said hierarchy of controllers comprises a controller located at or near the antenna, and a distant central controller.

39. (new) A cellular base station telecommunication system comprising:
a plurality of separately driven arrays of radiating elements, said arrays of radiating elements developing independently controllable beams;
a like plurality of electromechanical phase shifting structures associated with said plurality of arrays of radiating elements; and
a common control arrangement configured to independently control said plurality of phase shifting structures to independently control the direction of said beams,
said phase shifting structures each comprising an input and first and second output transmission line sections operatively coupled respectively to first and second spaced radiating elements in an array of radiating elements, and a moveable component moved under control of said control arrangement relative to said first and second transmission line sections to adjust the signal phases in said first and second transmission line sections to alter beam direction.
40. (new) The system of claim 39 wherein said plurality of separately driven but commonly controlled arrays of radiating elements are located on physically spaced panel antennas.
41. (new) The system of claim 39 wherein said phase shifting structures are each configured to adjust a beam downtilt.
42. (new) The system of claim 39 wherein said phase shifting structures are each configured to adjust a phasing of signals supplied to the associated array of radiating elements in response to traffic demands.
43. (new) The system of claim 39 wherein said control means is operatively coupled to at least one of said phase shifting structures by a telephone link.
44. (new) The system of claim 39 wherein said control means is operatively coupled to at least one of said phase shifting structures by a wireless link.
45. (new) The system of claim 44 wherein said wireless link is a radio link.
46. (new) The system of claim 39 wherein said control means is a personal computer.
47. (new) The system of claim 39 further including an antenna support structure, and wherein at least part of said control arrangement is located at said antenna support structure.
48. (new) The system of claim 39 further including an antenna support structure, and

wherein at least part of said control arrangement is located remotely from said support structure.

49. (new) The system of claim 39 wherein said control means is adapted to change by predetermined amounts a phasing of signals supplied to a selected array of radiating elements.

50. (new) The system of claim 39 wherein said control means is adapted to identify a status of a selected beam.

51. (new) The system of claim 39 wherein movement of said moveable component under control of said control arrangement differentially advances signal phase in one of said first and second transmission line sections while commensurately retarding signal phase in the other of said first and second transmission line sections.

52. (new) The system of claim 39 wherein said control arrangement is a portable or handheld device.

53. (new) The system of claim 39 wherein said control arrangement includes a hierarchy of controllers.

54. (new) The system of claim 53 wherein said hierarchy of controllers comprises a local controller located at or near each of the arrays of radiating elements, and a distant common central controller.

55. (new) The system of claim 39 including an electric motor mechanically coupled to said moveable means and responsive to said control means.